FACTORS INFLUENCING SERVICE DELIVERY IN PUBLIC HOSPITALS: A CASE OF NAIROBI COUNTY, KENYA

BY

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2016

DECLARATION

This report is my original work and has not been presented for the award of a degree in the University of Nairobi or any other University.

Signature……. Date……..

Kenya Brian Omondi

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This report has been submitted for examination with my approval as the University Supervisor.

Signature…… Date……

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DEDICATION

This report is dedicated to my family, especially my wife for moral and financial support, my children, brother and sister during the whole process of the study.

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UNIVERSITY OF NAIROBI

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune-Deficiency Syndrome
CBO	Community Based Organizations
CMO	County Medical Officer's
FBO	Faith Based Organizations
FHI	Family Health International
GPRS	General Packet Radio Service
GSM	Global System for Mobile Communications
HIV	Human Immunodeficiency Virus
ICT	Information, Communication and Technologies
ILS	Integrated Logistic System
ISO	International Organization for Standardization
LAMIS	Lamiya Information System
MSD	Medical Store Department
NGO	Non Governmental organizations
PC	Personal Computor
PDA	Personal Digital Assistance
PPH	Post Partum Hemorrhage
SMS	Short Message Services
UHIN	Uganda Health Information Network

ABSTRACT

This research project was conducted on 'Factors influencing service delivery in Public Hospitals: a case of Nairobi County, Kenya'. The study was conducted at Kenyatta National Hospital, Mbagathi Hospital and Mama Lucy Kibaki Hospital in Nairobi County. This study was initiated because of recent labour unrest due to dissatisfaction by staff presenting as refusal to offer services due to delayed or refusal to pay dues, poor working environment, inadequate infrastructure and lack of commitment by management to engage with employees. The study focused on four areas, which were Management Style, implementation of ICT services, Training and frequency of drug supply. Descriptive survey was used for generating needed information. The target population was respondents in management position in administration, wards, pharmacy, procurement offices, finance and ICT Departments. Simple random method was used to get respondents in this study. The 96 respondents included 34 respondents from KNH, 31 respondents from Mbagathi Hospital and 31 respondents from Mama Lucy Kibaki Hospital. An approval for data collection was obtained from NACOSTI, Kenyatta National Hospital, Mbagathi Hospital, Mama Lucy Kibaki Hospital and Nairobi City County. Questionnaires were used for data collection. Pretesting done at Makadara Health Centre after which appropriate adjustments were made. A total of 34 respondents from Kenyatta National Hospital, 27 respondents from Mbagathi Hospital and 31 respondents from Mama Lucy Kibaki Hospital were involved in the study. 92 respondents returned questionnaires and this represented 95% rate of response. Data analysis was done using SPSS and Microsoft excels computer applications. It was found out that management of these hospitals had a greater influence on how services are delivered and decision making process, a view given by 38% of the respondents, less assignment is delegated and there could be a positive improvement if the management was changed as given by 42% of the respondents. The findings showed that information systems have not been fully integrated in the hospitals operation as given by 57% of the respondents while the level of training was a factor considered while offering services, an opinion given by 97% of the respondents. The results of the study show that drug supply was not adequate mainly due to procurement bureaucracies within the hospitals according to responses given by 61% of the respondents. The information obtained in the study is useful for dissemination to the hospitals' management and staff, Ministry of Health stake holders and policy makers and other stakeholders in Public Health sector for inclusion in quality management and quality improvement of services

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Quality service delivery as defined by International Organization for Standardization (ISO) is a relative concept and in most cases where inherent characteristic of a service meets the requirements of patient, then it can be rated as high in quality (Reinartz, 2004). Service industries like hospitals for example, experience of patients plays a crucial role in rating and assessment and ranking of quality of services offered in these facilities. Quality in health service comes in terms of newer technology, effective medication, and qualified staff to and adequate patient ratio, effectiveness, affordability and efficiency of service delivery (Tam, 2005). While technical quality in health sector is defined primarily on the basis of the technical accuracy and effectiveness of the medical diagnoses and procedures or the conformance to professional specifications, functional quality is the manner in which health service is actually delivered to patients (Dean and Lang, 2008).

In Kenya, like most developing countries in Africa, premature deaths and preventable diseases still inflict a high toll in communities and its people. Inadequacy in access to basic health services is affecting distinct regions, areas, communities, and social groups in these countries.

Most Public Hospitals in the recent past have witnessed employee dissatisfaction presented in terms of refusal to offer services due to failure of payment of dues, poor working environment, inadequate infrastructure and lack of commitment by the management to engage with employees. This gap in management of Public Hospitals has led to unwarranted suffering by the patients who peg their hopes on the services offered by these hospitals.

Management style therefore is important in service delivery in Public Hospitals and these calls for realistic view of the demands of employees as well as well being of the patients who rely on these services. The basic infrastructure require to achieve the best out of the Public Hospitals need to incorporate implementation of Information, communication and technology. In many aspects, online services need to be utilized in admission, management and the process of discharge of patients in these facilities.

ICT in most Public Hospitals is mainly reduced to registration of staff on admission and payment services but has not been fully utilized to capture diagnosis and treatment of patients using modern technologies, admission and movement of patients, document management and

record keeping, financial services including inline, mobile and card payments to achieve its full potential to reduce bureaucratic paperwork and enhance service delivery.

A well established facility will require a well educated and trained workforce. Public Hospitals have one of the best trained personnel but lack the necessary tools and equipment for regular update of the skills. Training is very necessary due to faster change in technology and treatment and diagnostic methods. These require a flexible and easily adaptable workforce that is quick to change with the ever changing healthcare field with regular trainings. For efficient services, the hospitals also need to recruit and train highly specialized and talented team and regularly update their skills through training and development

The procurement Department of the hospitals deals with stocking and distribution of drugs which are essential for treatment and management of these staff. There is need for adequate supply of drugs which will assist in management of staff at various levels with different diseases to ease the burden of hospital stay and long queues within the hospitals. Most Public Hospitals have been plagued by inadequate supply of drugs, making the relatives of the patients to purchase the items from private pharmaceutical companies, worsening the already existing inefficiency.

1.2 Statement of the Problem

Kenyan healthcare system can be categorized into three in relation to where the funding for the facilities are acquired. Public Hospitals are mainly funded by the Government of Kenya with minimal input from copay by the patients. Private hospitals are profit making facilities which charge the patients for all the services rendered thereby getting their revenues for operation of the hospitals and a profit out of the business. Another category of hospitals are managed by NGO's, FBO's and Philanthropists mainly offer services at subsidized rates and most of the time caters for the underserved areas.

Previous experience in these facilities revealed a slow pace of service delivery in Public Hospitals which was not witnessed in other categories of the hospitals. A delay in offering services, frequent disputes between management and staff in relation to delayed payment of dues, inadequate working equipment and poor work environment formed part of disruptions of service delivery. These disruptions were not witnessed in private facilities as their operations were smoother and the process from admission to discharge had very minimal disruptions. This prompted the researcher to investigate what might be the reasons behind slow service delivery in Public Hospitals.

Previous studies done in this area identified poor state of healthcare services in most of the public healthcare institutions including major hospitals in Kenya which resulted in discontent among majority of the patients, high staff turnover and low morale among staff, which made it difficult to offer a 24 hour clinical service resulting in challenges with patients care and ballooning cost of operations due to inadequacies and inefficiencies (Owino and Korir, 2000). The result indicate that majority of patients therefore seek for alternative healthcare providers abroad and spread negative statements which further affect the growth and development of most of the healthcare institutions around the country (Tam, 2005).

The situation is further complicated due to patients' perception of managerial and functional issues, which is perceived and interrelate with when seeking treatment such as internal processes, physical facilities, interactions with nurses, doctors and other support staff as somehow poor and not responsive in their study on the relationship between service quality, customer satisfaction and buying intentions which was done in private hospital industry (Boshoff and Gray, 2004) and attitude to the service quality; the gap in expectation (Algılanan, Hizmet and Connor , 2003).

According to a study conducted by Wanjau, Muiruri and Ayodo in 2012 on the factors which were affecting provision of service quality in the public health sector Kenyatta National Hospital, they identified general low employees capacitation, low adoption of technology, poor communication channels and inadequate fund as the main factors that affect delivery of quality health services to patients attending public health facilities and impacting on perception of health service quality, satisfaction and loyalty of patients.

These challenges afflicting Public Hospitals led to disputes between management and operations staff leading to frequent strikes which sometimes lasted for weeks, leading to abandoning of patients in hospitals beds; in pain and agony, with a trail of deaths, which in most cases could be prevented.

1.3 Purpose of the study

The study was conducted to determine how these four factors influence service delivery in Public Hospitals, a case of Nairobi. The study was focusing on the influence of management style, implementation of ICT services, training and frequency of drug supply on service delivery in Public Hospitals in Nairobi. These four factors came about as a direct experience of the researcher through interaction with Private and Public Hospitals.

These factors seemed to have been more relevant in Private Hospitals where the researcher had interacted with staff and patients' that was not in Public Hospitals, thereby prompting a study.

1.4 Objectives of the study

The four objectives in this study were:

1. To establish the influence of management style on service delivery in Public Hospitals in Nairobi County.
2. To determine the influence of implementation of ICT services on service delivery in Public Hospitals in Nairobi County.
3. To establish how training influences service delivery in Public Hospitals in Nairobi County.
4. To determine how frequency of drug supply in Public Hospitals influence health care service delivery in Nairobi County.

1.5 Research questions

The questions which were answered in the study were:

1. How does management style influence healthcare service delivery in Public Hospitals in Nairobi County?

2. How does implementation of ICT services influence service delivery in Public Hospitals in Nairobi County?

3. How does training influence service delivery in Public Hospitals in Nairobi County?

4. How does frequency of drug supply influence service delivery in Public Hospitals in Nairobi County?

1.6 Significance of the study

This study was initiated in order to find out how four factors influence service delivery in Public Hospitals in Kenya. The four factors were management style, implementation of ICT services, training and frequency of drug supply. Over the years, the hospitals have been the bedrock of healthcare service delivery in Kenya but have changed of late as more and more service providers tend to address their grievances through strikes and labour unrests. Governments and management of these facilities tend to delay dispute resolution leading to labour boycott.

Patients and relatives found it difficult to settle the bills as the system used cannot fully satisfy their need for a faster service delivery. The bills given on papers sometimes got lost along the way between the wards and the cashier office, causing more agony and pains to the relatives. This called for a swifter system which would revolutionize payment and billing services and reduce the long queues in these hospitals by use of either online, cards or mobile services for such transactions.

Most of the staff in Public Hospitals is being trained by the past system making meeting the challenges in the changing health environment become complex. This requires regular update of skills through training and development using modern technologies and tools that are available for practitioners. With the rapid change in technology coupled with ever changing ways of management of medical and surgical conditions, there is need for regular update of skills and upgrade of available infrastructure to match the modern management protocol.

Then the need for regular stocking of medical supplies in the hospitals to ensure that the process continues need to be looked into for good service delivery. There is need for continuous supply of medicine and drugs to ensure uninterrupted services for the patients.

The findings of this study are expected to increase understanding and improve existing academic knowledge regarding these factors in Public Hospitals in the County. Policymakers and health practitioners will also find the information useful in developing policies and procedures that guide this health process. The findings will provide proper guiding framework for the development of infrastructures that will ensure quality service delivery to patients and clients in Public Hospitals.

1.7 Assumptions of the study

It was then assumed that during the study the respondents will fill in accurately and completely the questionnaires and answers the questions truthfully. Since a specific research sample was used, it was assumed that the sample used would be representative of the managers and other hospital representatives in the Nairobi County.

1.8 Limitations of the study

Study limitations refer to issues that were out of the researcher's control. In this study, time was a significant limitation during data collection process and analysis since study was conducted over a short period of time. The study should have been conducted in large and diverse populations and hospitals but it was restricted to a few Public Hospitals with their

Administration staff, Ward managers, Pharmacists, Procurement officers, financial officers, ICT support staff and a few patients in these facilities within Nairobi County.

1.9 Delimitations of the study

Delimitations of a study refer to issues that were within the researcher's control. The geographical region covered by the study was a delimitation of this study. The study was done in three Hospitals in Nairobi County and views of Public Hospital managers on the topic under study were covered. Another delimitation of the study was the availability of respondents for the survey as the main reference point for gathering information concerning the factors that influence the quality of healthcare services delivery in Public Hospitals in Nairobi County.

The research was conducted in Nairobi County. The Public Hospitals which were included in the study were Kenyatta National Hospital, Mama Lucy Kibaki Hospital and Mbagathi Hospital which are located in the County. Nairobi had 3,138,295 inhabitants who live in it as per 2009 census.

1.10 Definition of significant terms

The meaning of significant terms used in the study are given below

Developing nations These are countries that are not developed and can be found by inverting factors that define a developed nation: where people tend to have lower life expectancy, less education, and generally less income

Drug supply In terms of this study is the process which the medical supplies take from the Government central stores Kenya Medical Supplies Agency to Kenyatta National Hospital, Mbagathi Hospital and Mama Lucy Kibaki Hospital. This entails the frequency of supplies, availability of procured drugs and storage at these three hospitals.

Health care As used in this study refers to the work done in providing primary care (prevention), secondary care (treatment and curative), and tertiary care (palliative), as well as in public health. It is delivered by practitioners in health profession

ICT services Information communication and technology services in this study's perspective are services, offered mostly via computer based devices, applications and systems used to increase efficiency of services delivered in Public Hospitals.

Management style Refers to the powers, duties and responsibilities of managers in these hospitals and how they exercise their authority in operation of the hospitals. Management style is an overall method of leadership used by a manager: a characteristic ways of making decisions and relating to their juniors.

Public Hospital A Public Hospital or Government Hospital is a facility that is funded government for its daily operation. They provide medical care either free of charge or at subsidized rates, the cost which is covered by financing from the National or County Governments.

Service delivery Service delivery in this study context means the process of offering needed assistance to the patient from admission until discharge, both in and outpatient services including the process of discharge from hospital as per the opinion of service providers and the patients.

Training Training is described as all the skills and knowledge acquired through formal education system, seminars, workshops and continuous medical education and professional developments in relation to this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains an overview of service delivery in healthcare, challenges facing the health sector in developed countries, other developing countries and in Kenya. A review of the influence of management style, implementation of ICT services, training and influence of drug supply on public health service delivery in developed countries and Kenya is presented. The chapter also gives a brief review of theoretical framework, a conceptual framework and a summary of the literature review.

2.2 Overview of service delivery

Kenyan Government made a Policy Framework on Health in 1994 to develop and manage health services. Ministry of Health then developed the Kenya Health Policy Framework Implementation Action Plan in 1996 and established the Health Sector Reform Secretariat in the same year under a Ministerial Reform Committee established in 1997 which was to spearhead and oversee the implementation process which were then aimed at responding to the constraints which included witnessed decline in health sector expenditure, evident inefficient utilization of resources, decision-making which was centralized, inequitability of management information systems, health laws which were outdated, district level inadequate management skills, rising poverty levels, ballooning burden of disease, and a population which was rapidly growing (Muga et al, 2004). Health is included in Vision 2030 as a social pillar in which the country's aim is to provide an efficient integrated and high quality affordable health care for all citizens with a priority being given to preventive care at the community and household levels using a decentralized national health care system strategy.

Challenges which are facing health are inadequate funding aimed at supporting planned and initiated activities, a low rate of births at health facilities despite high antenatal care coverage countrywide, HIV/ Aids pandemic ravaging communities and a higher poverty levels, inadequate and or uneven distribution of healthcare personnel, which hinders delivery of quality services, and poor health infrastructure, all of which are well outlined in the Vision 2030 (GoK, 2007), which is a blueprint for development in Kenya.

Following devolution decision making and funding to the Counties which are entrenched in the Constitution of Kenya 2010 and Vision 2030, challenges will emerge which will threaten to cripple the already overstretched devolved health system.

2.3 Influence management style on service delivery

Management of Health care system has previously been to some extent inefficient, incoherent and mostly driven by supply, thereby keeping patients on the outside the design, development and also delivery process (Berenson and Cassel, 2009). With history, health care organizations, mainly public viewed customer service as an independent, non-critical function which was best left to professional judgment of physicians where necessary. But today there is a shift to a model which is organizational in which the patients have influence on every function (Glickman et al., 2007). Organizations operating in Public Health, which continuously take up challenge of huge restructuring, encountered and are still experiencing difficulties in full and proper implementation of these services (Glickman et al., 2007).

The difficulties have so far been the slow ability of the workforce to cope with rapidity in change, which ends up eroding established power patterns thereby leading to tensions and mistrust among middle and senior management (Scotti, Harmon and Behson, 2007).

Restructuring can also sometimes be derailed and delayed due to unforeseen secondary system mishaps like breakdown in information technology resources (Glickman et al., 2007).

Senior management must demonstrate commitment to service quality and middle managers should also show their commitment, and ensure that they communicate principles, strategies and benefits of their services to the people for whom they have responsibility (Berenson and Cassel, 2009). When management fail to address the culture of an organization more likely its initiatives will fail.

Like in most developed countries, managing public health in USA is characterized by emphasis on performance and improving quality of healthcare. In order to attain these critical indicators, public health management is fully equipped with the necessary resources and management skills (Nembhard, et al., 2009). The hospitals personnel are more equipped with the management skills that enable them to efficiently manage resources and provide evidentiary basis for determining patient, clinician, and organizational outcomes (Nembhard et al., 2009). In other words, the health professionals are well capacitated to enable them improve the patient services health outcomes.

In USA, healthcare is managed and is intended to reduce the cost of health benefits while at the same time improving the quality of care. The need for improvement of care in the public health sector has continuously grown rapidly during the 21st century, and has led to competition in the healthcare industry (Berenson and Cassel, 2009). With this completion, patient satisfaction, quality of service, and efficient management of resources are providing the evidence for measuring patient, clinician, and organizational outcomes (Scotti et al., 2007). With quality outcome as the emphasis, it has becoming critical for healthcare organizations to develop and implement a good strategy which will provide effective care that will be appealing to patients and focusing on controlling costs (Scotti et al., 2007). Healthcare finds it hard to attract and retain patient and talented employees while at the same time delivering effective and efficient care consistently.

Effective management is cited as a vital enabler of quality from the providers' perspective, managers, policy-makers and equally the payers. Management affects **e**verything within the hospital environment (Mosadeghrad, 2014). Good ideas remain useless if people have them for quality improvement, where the management is not good. Most studies have cited lack of professional managers in public healthcare organizations. Most managers are not qualified professional managers, rather are hospital physicians, nurses, doctors or are healthcare professionals (Mosadeghrad, 2014). In fact, in most Public Hospitals, the managers have no experience and knowledge in management. According to Buong', Adhiambo, Kaseje, Mumbo, Odera and Ayugi, in their study done in 2013 the authors determined that majority of public health managers were trying to resolve problems as short term measures. Besides, there were no criteria and objectives which were in place used to appoint and select managers in healthcare facilities. National policies were considered prescriptive and did not allow for sufficient flexibility which was needed to adapt to local circumstances. Mostly, public healthcare managers were demanding more power in order to identify and recruiting the most appropriate personnel needed to provide quality services to patients (Buong' et al, 2014). Further, managers are not in a position to control physicians as they do to other employees. For example, medical doctors expected their colleagues or co-workers to have been more responsible empowered enough to perform the job well.

2.4 Influence of implementation of ICT services on service delivery

Improving the quality, accessibility and efficiency of healthcare for citizens is considered as the main aim of Information Communication and Technologies for health. ICT for health is considered as the application of information and communication technologies across a range of functions that are affecting the health sector.

Controlling escalation of costs and improving the healthcare of citizens is what every nations seek to achieve. In 2010 alone, the size of ICT enabled healthcare services was estimated to be about $ 3.1 billion worldwide, and out of this, 80 per cent were in developed countries (Rudowski, 2009). Consultations which are done online by patients and doctors using websites and emails, distance referrals, emergency evacuations, and advance transmission of images and data of patients from ambulances is known to reduce lead times of intervention in emergency wards of most hospitals. This level of ICT in health has not been reached in developing countries by most professional and community users. Due to insufficient studies aimed at establishing relevance, applicability or cost effectiveness, most of these approaches are still at their relatively new stage of implementation (Berland, Elliott and Morales, 2010). The Governments in these nations therefore find it complex to determine their investment priorities especially in ICT (Chandrasekhar and Ghosh, 2001).

North America and Europe for example have application of ICT in healthcare service delivery in the advanced stage. In fact, the use of technology in delivery of health services has been described in various ways including telemedicine, tele-nursing, tele-homecare and many others. The use of ICT in delivery of healthcare services is hence the whole idea. The success of the use of ICT in the healthcare services delivery has been attributed to well develop technological infrastructure. A lot of studies have been conducted on how e-health has been achieved through the application of technologies. A significant contribution to technical solutions in social context and in relation to individual needs is therefore needed in research and practice of health-enabling and ambient-assistive technologies (Koch et al., 2009). Tele-health systems such as online and mobile tools have already opened up the possibilities for reducing hospitalization and an increase in home care (Venter et al., 2012). Studies associated with tele-nursing have indicated an increased benefit of using technology in the nursing care delivery system in USA. The benefits of using the tele-nursing technologies range from improved diagnosis and consultations to the development of career options and professional nurses (Hebda and Czar, 2013).

Most importantly, tele-nursing have led to the improved patients' clinical and healthcare outcomes. Each of the benefit areas are related to the patients' safety concerns (Hebda and Czar, 2013). Tele-nursing is becoming an attractive and exceptional area in the professionals nursing practice where practitioners are required to develop skills in using the technologies that are applied in the patient care delivery system.

Expectations in health have risen due to the advancement of information and communication technologies (Dury, 2005. ICT impacts in almost every aspect of the healthcare sector. Information management and communication especially in Public Health Sector is important and can be improved by the available system (Olukunle, 2009). The emergence of electronic health, which is ICT supported health provision, has reduced the cost of healthcare thereby increasing efficiency by data management and transfer, disease management and quality transfer of knowledge (Oladosu et al., 2009)

In Africa, South Africa emerges as one of the nations where e-health has found its wide applications. The success of e-health in South Africa has been attributed to highly developed ICT infrastructure, huge investments in ICT particularly by the Public Hospitals, well trained public health personnel, well developed training and health institutions and belief in the ICT solutions to the health problems (Adesina, 2007). Currently, technology plays a critical role in the healthcare services delivery in South Africa. However, like most developing countries, innovative approach to eHealth remains significant. One of the successes of such innovations is the application of Cell-life and Mindset health models. Cell life is a system which was started by two universities in South Africa in 2003for the therapeutic and logistics management of HIV/AIDS population. It is built on mobile devices with 3G/GPRS/SMS networks mostly on mobile phones for health solutions. It is mainly used by community health volunteers to assist their fellows on HIV positive management and also assists in organizational planning for drug supply and emergency situations in the community (Adesina and Jim, 2008). Emphasis of e-health solution exists in Nigeria where rural communities trying by using ICT to solve various challenges of health services delivery (Ajayi and Tokon, 2009). Development of innovative solutions that require less infrastructure provision is essential in such communities to reduce cost of operation (Bello, 2004).

In Kenya, evidence that healthcare professionals have a better access to adequate and reliable knowledge in Information Communication Technology is little (Gatero, 2011). The country continues to face health threats for example ravaging HIV/AIDS pandemics, the spread of infectious diseases including malaria, soaring levels of infant and maternal mortality, very low levels of life expectancy and further deteriorating healthcare facilities (Gatero, 2011). Notable barriers include few physical access capturing and slow or unreliable internet connectivity, very high subscription cost of information materials, inadequate awareness of what is available, lack of relevance of available information that ends up not meeting peoples' needs in terms of scope, style, or format, limited time and incentives to access information and lack of valued interpretation skills (Bii and Otike, 2003). Public Hospitals in Kenya have not shown robust commitments or willingness to invest in information technology despite its wide application and use. Even though ICT application is gaining popularity within the private sector, the public institutions are yet to embrace the significance of ICT in healthcare service delivery.

2.5 Influence of training on service delivery

To meet the current and future performances, training and development becomes a continuous process for improving the caliber and competence of employees. In addition to imparting requisite skills by training to all levels of employees, management also aims at changing the behavioural patterns of the employees in a direction which is in line to achieve the organizational effectiveness, sustainability and growth (Argote and Ingram, 2010).

In this era of fast changing scenario, solid financial foundation is not enough for any public health care organization nor is state of the art technology, automated systems, because the cutting edge now remains the quality of the human resources, which at the end of the day decides whether the public organizations would ultimately survive in the long-run (Argote and Ingram, 2010). As a service sector, health care remains an important sub set, whose growth is forecasted to be the most rapid in the changing economic scenario of the country.

The past years have witnessed several problems emerge in the area of training. The focus has been on urban curative care in tertiary care settings concerning basic medical education hence less preparation for doctors in roles in rural primary health systems with barely no or less system for induction when these medical officers join government system in primary health care. This compounded by the fact that they do not have a basic training in management and public health yet they are expected to supervise staff under them in the cadre (Argote, 2010).

Nurses training either way in the lower level is also mostly technical in operation with a very limited component of social aspects of health care, community involvement and participation, mobilization and health education. Public and Private healthcare organization therefore need to revamp their entire organizational strategy in view of the above, in respect of procuring, retaining, developing and grooming their human resources in a manner that they are not only useful and valuable but most important human assets for the present, and vital with uniqueness for the future.

Within the Public Hospital setting, various personnel both in the management and lower cadre of hospital employees are in one way or the other involved in the healthcare services delivery. The hospital staff includes physicians, nurses, administrators, and ancillary staff. Studies indicate a positive relationship between highly skilled personnel and improved health services delivery outcomes (Argote and Ingram, 2010). Establishing the health training framework and programs, appropriate recruitment methods and continuous training and development of the health staff remains critical for the attainment of highly skilled personnel within Public Hospitals that geared towards attaining the desired outcome. The phenomenon is common in developed countries and is one of the reasons why such countries attain greater services in Public Hospitals. Hospitals need to implement human resource strategies like selective hiring, retention, monitoring performance to meet standards and retain credentials for them to offer quality services and growth (Cohen and Levinthal, 2001). Studies in Kenya have observed a very low standard of teaching in training schools for auxiliary nurses is very low in comparison with training standards in developed countries around the world thereby explaining the substandard patient and community care (Argote, 2010). Lack of proper training systems and inadequate reorientation courses has led to this substandard training, especially in general hospital management as there is still evidence of reliance on conservative training programs by health training colleges which have been taken over by events and time (Argote and Ingram, 2010). This screams of a clear neglect of training in the health sector.

2.6 Influence of frequency of drug supply on service delivery

There is a significant impact which is played by drugs, medical supplies and equipment on the quality of patient care which further account for a considerably high proportion of health care costs. In order to avoid wasting the available limited resources, health services need to make informed choices about what to buy so that they can meet priority health needs (Granehein and Lundman, 2004). There exists less information about essential medical supplies and equipment though most Public Health organizations have useful information about essential drugs.

Even with this information, selection of supplies and equipment has been given little attention with availability of a range of brands and items to choose from leading to acquisition of inappropriate and technically unsuitable items, which are incompartible with existing equipment, unavailable spare parts and consumables or unskilled staff on their use all together (Dogba and Fournier, 2009). Procurement is only one part of managing medical supplies and equipment, and effective storage, stock control, care and maintenance are also critical if health services are to get the most out of what they buy (Dogba and Fournier, 2009). The Government of Kenya in collaboration with other players has produced medical supplies and equipment manual that remains critical in addressing some of these challenges. The manual applies to all healthcare levels as a reference for responsible procurement and management of medical supplies and equipment (Granehein and Lundman, 2004). Middle income countries face real shortage of drugs and medical supplies for healthcare services posing a challenge in provision of health care thereby contributing to poor quality health services and a further leading to increased mortalities (Tumwine et al., 2010).

It is estimated that almost 99% of all deaths due to inappropriate equipment and drugs occur in developing countries especially is the in rural areas. Adequate health services involving emergency care to the public could lead to drastic reduction in such deaths. Most countries in sub-Saharan Africa still finds it complicated to access essential medical items thereby compromising provision of timely care to the patients (Tumwine et al., 2010).

In Kenya, supply and availability of medical items and drugs is still an unknown system with devolution worsening the situation with County level hospitals being affected more by lack of adequate drugs and medical supplies (Mselle et al., 2013). The government through its strategy of improving healthcare services delivery aims to provide basic drugs and medical supplies by strengthening public health facilities (Olsen, Ndeki and Norheim, 2005). Currently, due to decentralization following the new constitutional, there is devolution of healthcare to the County governments that are responsible for health facilities within their jurisdictions. However, the Ministry of Health has consistently provided funds for the procurement of drugs and critical medical supplies via its Medical Stores Department (Mselle et al., 2013).

2.7 Theoretical framework

This study was informed by the change theory of Kurt Lewin (Bernard, 2004). It is based around the process Unfreeze, Change and Freeze, providing a higher level approach to the change process. With this theory, a manager or other change agents have a chance on a framework for implementing change effort however sensitive but seamless as possible

It follows three steps:

i. Implementing a radical change
ii. Reduce disruption of operations structure
iii. Permanent adoption of change

The change theory can be well adopted by a variety of change agents to ensure that the devolution of health services to the lowest levels is well executed, operational and function to the greater good of the people. The changes will come with resistance due to the initial centralized system but with good understanding of the process of change, most administrators will be able to pass this through to their team members in terms of change in management, implementation of ICT, regular training and streamlining the procurement process.

2.7.1 Unfreeze

Habits and routine naturally settled in where structures have been in place for a while. People in an organization may staff off course in as much as the organization may be headed in the right direction. Unfreezing is simply a means of getting people to understand a perspective on their daily activities, reject their undesirable habits, and be open to new ways of achieving the objectives. It sets the wheels of change in motion.

2.7.2 Change

With open minds, change can then start. The process is very dynamic and for effectiveness, it has to take time which involves a transition period. People take new tasks and responsibilities so as to gain efficiency, but has to be gradual and sometimes bring slowness to the organization before it can steady.

2.7.3 Refreeze

By making change permanent, it can then reach its full desired effect. The new organization become standard after the change has been cemented and all effort should be made to ensure that it succeeds.

2.7.4 Force field analysis

Lewin's force field analysis is a model that describes restructuring and making decision between driving and restraining forces and finally equilibrium where the forces match. The analysis investigates where power concentrates, decision makers, those for and against change and finally ways to influence dissenting voices. In an organization, **Driving forces** are looking for opportunity to improve while **Resisting (restraining) forces** are pro status-quo. The goal is to achieve equilibrium. This theory is relevant to this study as it will tend to understand the relationship between management and junior staff in terms of handling of disputes and conflict resolution. This will also determine the factors at play that usually fail to reach a consensus leading to labour unrest in these hospitals and how they can best be understood. Finally, the theory will assist the researcher to best understand how implementation of change and consider challenges that the management may face in the processes.

2.8 Conceptual framework

According to Mugenda and Mugenda (2003) a conceptual framework is considered as a hypothesized model for identifying concepts under study and an existing relationship. In this study, the independent variables are ICT, Management issues, training and drug supply while the dependent variable is service delivery. Government policies are the moderating variables as shown in Figure 1.

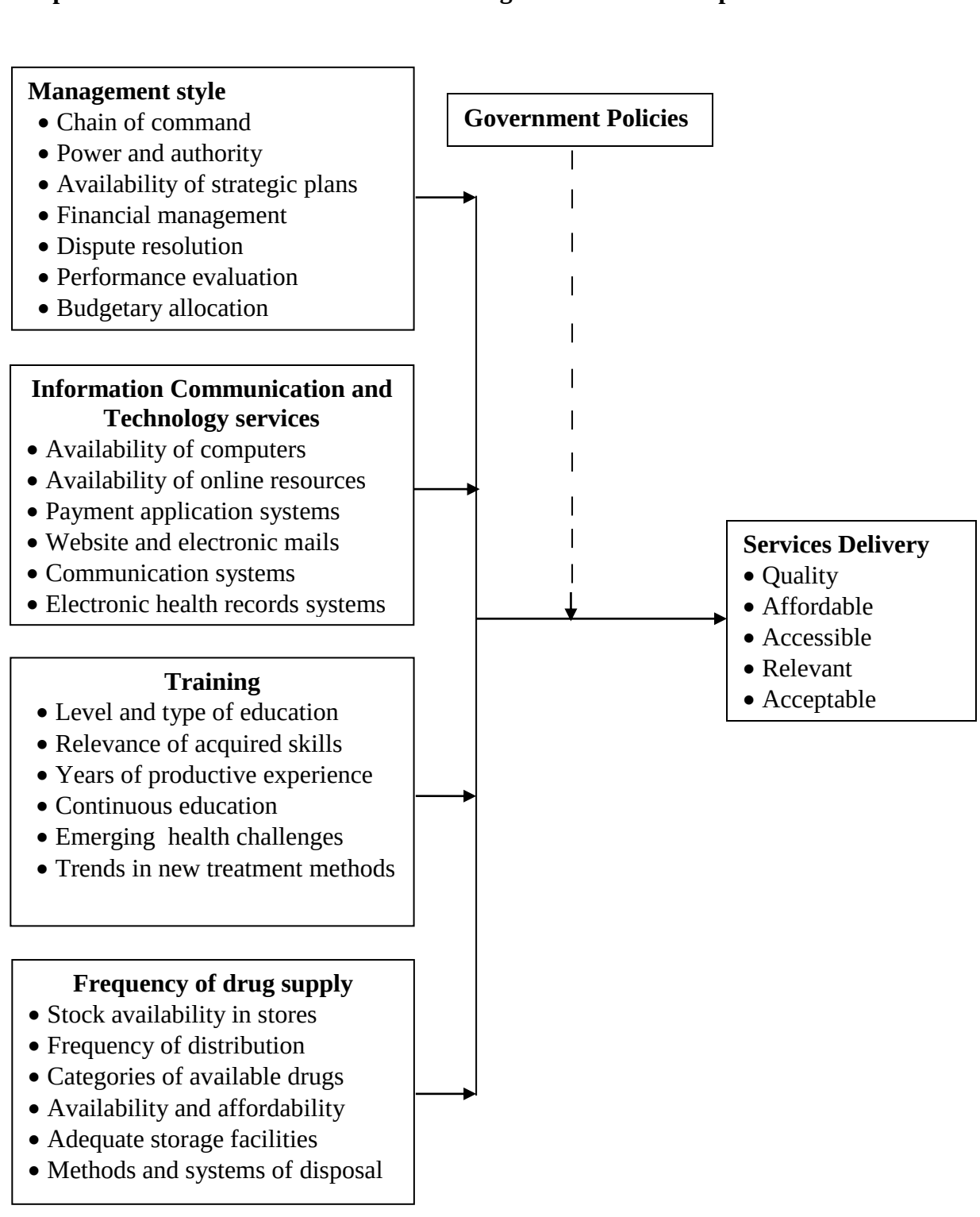

Figure 1 Conceptual Framework

2.9 Summary of literature review and knowledge gap

The influence of management style, implementation of ICT services, training and frequency of drugs supply in Public Hospitals in Nairobi County, Kenya is not well understood. While much of the contributions of these factors to the overall healthcare services delivery had been debated, how they influence the Public Health service delivery at the local levels is still in its infancy stage of establishment. Further, it is due to these factors that the sector of public health has failed to provide expected quality services. The study remained critical in tracing the degree to which these factors influence health services delivery in Public Hospitals in Nairobi County. The study provided information on the health services delivery in Public Hospitals as well as the new approaches to the current needs of innovative health services as well as the main drivers of innovations in Public Health as it relates to the quality of health service delivery.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology which was employed in the study. The chapter provides a description of various techniques including research design, target population, sampling procedures and sampling methods, data collection tools and methods and ethical considerations which were observed in the study. The study focused on Kenyatta National Hospital, Mbagathi Hospital and Mama Lucy Kibaki Hospitals as the three main Public Hospitals that deal with all in and outpatient services, maternity, pediatric and specialized services. Pumwani Maternity Hospital was not included due to its function of offering maternity services alone to patients.

3.2 Research design

In this study, a descriptive survey method (Mugenda and Mugenda, 2003) was used as the design due to its suitability in data collection to answer the research questions. In this case, though, the tool was a well-structured questionnaire

In order to investigate the influence of management style, implementation of ICT services, training and frequency of drug supply on service delivery, this particular research study used a quantitative research. Data was collected from the respondents by use of a questionnaire.

3.3 Target population

In this study, the target population was the management staff (Ward managers, Pharmacists, Procurement officers, financial officers, and ICT support staff) at Kenyatta National Hospital, Mbagathi Hospital and Mama Lucy Kibaki Hospital in Nairobi County. Pumwani Maternity Hospital was not included as it deals mainly with maternity services.

Kenyatta National Hospital had 4646 staff members (Kiongo, 2012); Mbagathi Hospital had 710 staff while Mama Lucy Kibaki had 650 staff members. The study target population was the non-unionized staff at these three hospitals, making half of the total population (Njeru and Meme, 1996).

3.4 Sample size and sampling procedure

A simple random sampling method, a probability method was use. The unit was Ward managers, Pharmacists, Procurement officers, financial officers, ICT support staff who fell within the inclusion criteria at Kenyatta National Hospital, Mbagathi Hospital and Mama Lucy Kibaki Hospital. These category of staff were found to make up half of the total hospital management staff as per a study conducted by Njeru and Meme in 1996

3.4.1 Sample size

The formula shown was used to determine the sample size (Mugenda and Mugenda, 2003)

$$n = \frac{N}{1+N(e)^2}$$

Where,

n was the sample size for the study

N was the study population

e was the level of precision

Using the above formula, the sample was calculated as follows;

N= 3000

e= 10%

$$n = \frac{3000}{1+3000(0.10)^2}$$

=96

The researcher used a sample size of 96.

The calculated sample size was distributed proportionately by using simple random sampling procedure.

Table 3.1 Sample size of respondents

Hospital	Sample size
Kenyatta National Hospital	34
Mbagathi District Hospital	31
Mama Lucy Kibaki Hospital	31
Total	**96**

3.4.2 Sampling procedure

Ward managers, Pharmacists, Procurement officers, financial officers, and ICT support staff were deemed viable when carrying out the research (Evans and Lindsay, 2009). The formula by Mugenda and Mugenda was applied to 3000 employees who were considered the target population and the researcher arrived at a sample size of 96 participants. Then the researcher distributed this equitable to enable an almost uniform distribution of data and respondents, but with consideration of Kenyatta National Hospital staff that were quite high in number. The researcher then came up with 34 respondents for Kenyatta National hospital, 31 respondents for Mbagathi Hospital and 31 respondents for Mama Lucy Kibaki Hospital as shown in Table 3.1.

3.5 Data collection instrument

A structured questionnaire for this study had been modified to include open and closed ended questions for ease and expression by the respondents. The questionnaire was designed to ask questions in the four areas of study: management style, Implementation of ICT services, training and frequency of drug supply including taking the basic bio-data. The instrument was pretested at Makadara Health Centre and necessary adjustments were made before the actual data collection was done.

3.6 Methods of data collection

Data was collected using structured research questionnaires with open and closed ended questions which had been pretested at Makadara Health Centre and necessary adjustments were made. The questionnaires aided in collecting quantitative data (Mugenda and Mugenda, 2003). Data was collected by the researcher with assistance from research assistants at these three hospitals using the questionnaire which had both closed and open ended questions.

The respondents filled in the questionnaires and submitted complete research questionnaire to the researcher. The questionnaire had questions which were designed to gather data, for analysis and answer research questions (Afolabi et al., 2005).

3.7 Validity of the instrument

3.7.1 Pilot study

This was conducted in order to test whether the questionnaire was valid. It was carried out by researcher with assistance from research assistants at Makadara Health Centre. The pilot study achieved 10 respondents from the Health Centre. The purpose was to identify any errors in the questionnaire and correct them before data collection (Brotherton, 2008).

3.7.2 Validity

Simply defined, it is the accuracy of measurement. Validity measures the accuracy of the research instruments, in this case, the questionnaire. The questionnaire was well structured and tested prior to the research study in order to ensure that the research findings were accurate and more valid. However, this questionnaire remained valid for this specific research and within the given timeline. Content validity was obtained by discussing the items of the questionnaire with the supervisor.

3.8 Reliability of research instrument

A test is reliable only if it consistently measures what it is supposed to measure. When repeated over a period of time the result will remain the same. Reliability remains as the consistency of a research measurement and the degree to which an instrument measures and gives the same results every time it is used under the same condition with the same subjects in the process.
It therefore is the repeatability of a research measurement..

3.8.1 Split Half

This is obtained by administering the same test twice over a certain period to a group of individuals. The scores from and the scores from the second test is then correlated for stability. A correlation coefficient of 0.7 was considered acceptable for this study.

3. 9 Data collection procedure

Five research assistants assisted the researcher to in order to collect data. The questionnaires were administered to collect data and the completed questionnaires from the respondents were then collected.

The tool used was a well-structured questionnaire, which was physically administered to the respondents in the hospitals to gather relevant data for the study.

3.10 Data analysis procedure

A systematic approach in investigations used during data collection and after which the researcher transforms what is collected or observed into numerical data. The collected research data was analyzed quantitatively and percentages and values of the study were carried out by utilizing SPSS and Excel.

3.12 Ethical considerations

Ethical issues that could arise during the course of the study included authorization to conduct the study, permission from authorities, and acquisition of permits and informed consent of the participants. The power differences between the researcher and the participants, privacy and confidentiality of the participants and information (Kline, 2010) was also addressed. Permission letter was granted from the University of Nairobi to proceed for the study. A permit was granted by NACOSTI and a clearance letter from the Ethics Committee of the University of Nairobi and Kenyatta National Hospital. Nairobi City County then gave an approval letter for study at Mbagathi Hospital and Mama Lucy Kibaki Hospital. Mbagathi Hospital also gave their independent clearance letter for the study (Kline, 2010). All the participants were informed of the reasons for the study and objectives which were to be achieved after which the participants thereafter signed informed consent. No participant was required to include their names in the study as only signatures were sought for purposes of maintaining the integrity, privacy and confidentiality of the respondents. The participants were also made aware that withdrawal from the study was allowed at any point without any consequence. The participant's identifications wee concealed as none of them was allowed to write his/her names in the study documents. All the information obtained was treated with privacy and confidentiality and data analysis was done primarily by the researcher to observe this confidentiality.

3.13 Operational definition of variables

The operational definition of variables is shown in Table 3.2.

Table 3.2 Operational Definition of Variables

Objectives	Variables Independent	Indicators	Measurement	Measurement Scale	Type of Analysis	Tools of Analysis
To establish the influence of management style on service delivery in Public Hospitals in Nairobi County.	Management style	Chain of command	Responsibilities delegated	Ordinal	Descriptive	Mean
		Power and authority	Degree of delegation	Ratio	Descriptive	Percentage
		Decision making	Levels of chain of command	Interval	Descriptive	Mean Percentages
		Financial management	Efficiency of transactions	Ordinal	Descriptive	Mean
		Dispute resolution	Ease of operation	Ordinal	Descriptive	Percentage Mean
		Performance evaluation	Skilled personnel	Ordinal	Descriptive	Mean Percentages
		Budgetary allocation	Ratio of budget to actual	Ratio	Descriptive	Percentage Mean
To determine the influence of implementation of ICT services on service delivery in Public Hospitals in	Implementation of ICT Services	Availability of computers	Number of computers	Ordinal	Descriptive	Mean
		Availability of online resources	Online library	Nominal	Descriptive	Percentage Mean
		Payment application	Number of pay stations	Nominal	Descriptive	Mean

Nairobi County.		systems				
		Website and electronic mails	Degree of connectivity	Nominal	Descriptive	Percentage
		Communication systems	Telephones and emails	Ordinal	Descriptive	Mean
		Electronic health records systems	Paperless documentation	Ratio	Descriptive	Percentage
To establish how training influences service delivery in Public Hospitals in Nairobi County.	Training	Level and type of education	Qualification acquired	Ordinal	Descriptive	Mean
		Relevance of acquired skills	Articulation of duties	Ratio	Descriptive	Percentage Mean
		Years of productive experience	Number of years worked	Ordinal	Descriptive	Mean
		Continuous education	Number of CME's attended	Ordinal	Descriptive	Mean
		Emerging health challenges	Number of trainings attended	Ratio	Descriptive	Percentage
		Trends in new treatment methods	Upgraded the skills acquired	Interval	Descriptive	Percentage
To determine how frequency of drug supply in public hospitals	Frequency drug supply	Stock availability in stores	Number of individual stock	Nominal	Descriptive	Percentage
		Frequency of distribution	Number of deliveries per	Nominal	Descriptive	Percentage

influence health care service delivery in Nairobi County.			month			
		Categories of available drugs	Ratio of drugs supplied	Ratio	Descriptive	Mean
		Availability and affordability	Stock turnover rate	Ratio	Descriptive	Percentage
		Adequate storage facilities	Number of stores	Ordinal	Descriptive	Mean
		Methods and systems of disposal	Available expired stock	Ratio	Descriptive	Mean
	Dependent Service delivery	Quality	Number of cases	Ordinal	Descriptive	Percentage Means
		Affordable	Amount of debts	Nominal	Descriptive	Means
		Accessible	Number of patients	Ordinal	Descriptive	Means
		Relevant	Number of complaints	Ordinal	Descriptive	Means

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

The data analysis, presentation and interpretation are presented in this chapter. Statistical Package for Social Sciences and Microsoft Excel applications were used in the data analysis. Data presentation was done using tables and the result was interpreted.

4.1 Data Analysis, Presentation and Interpretation

The study involved data collection from three hospitals in Nairobi County: Kenyatta National Hospital, Mbagathi Hospital and Mama Lucy Kibaki Hospital. Out of the expected 96 respondents, 34 respondents were from Kenyatta National hospital, 27 from Mbagathi Hospital and 31 respondents from Mama Lucy Kibaki Hospital totaling to 92 respondents, representing 95.66% of the expected respondents (Table 4.1).

4.1.1 Response per hospital

The results of respondents from Kenyatta National Hospital, Mbagathi District Hospital and Mama Lucy Kibaki Hospital are given in Table 4.1.

Table 4.1: Response per hospital

Hospital	Respondents	Expected	Percentage
Kenyatta National Hospital	34	34	100.00
Mbagathi District Hospital	27	31	87.09
Mama Lucy Kibaki Hospital	31	31	100.00
Total	**92**	**96**	**95.66**

There were 34 respondents from Kenyatta National Hospital representing 100% response rate, 27 respondents from Mbagathi District Hospital representing 87% response rate and 31 respondents from Mama Lucy Kibaki Hospital representing 100% response rate.

4.1.2 Gender of respondents

The results of gender of respondents are given in Table 4.2

Table 4.2: Gender of the respondents

Gender	Number of respondents
Males	31
Females	61
Total	**92**

Among these 92 respondents, 61 were females while males accounted for 31 of the respondents in this study. This represents a ratio of women to men of two to one respectively, indicating that majority of respondents in this study were females.

4.1.3 Participants by age

The results of the number of participants by age is given in Table 4.3

Table 4.3 Number of participants by Age

Age (Years)	Participants	Percentage
20 – 25	17	18.48
26 – 30	33	35.87
31 – 35	18	19.57
36 – 40	10	10.87
41 – 45	6	6.52
46 – 50	5	5.43
51 – 55	2	2.17
Above 56	1	1.09
Total	**92**	**100.00**

The age of respondents were computed as per their age groups. The results are given in Table 4.3 where the age group between 26-30 years of age had the highest respondents at 33 while 56 years and above had only one respondent. This shows that the hospitals have a young population of workforce with an average age of 28 years of age being the majority in this study.

4.1.4 Years of experience

The study went further to find out the number of years of experience which every respondent had spent in their respective hospitals as shown in Table 4.4

Table 4.4: Years of experience

Years of Service	Participants	Percentage
0 – 5	50	54.35
6 – 10	23	25.00
10 – 15	8	8.70
16 – 20	6	6.52
21 – 25	4	4.35
Above 25	1	1.09
Total	**92**	**100.00**

Most of those who participated in the study had worked in these hospitals for a period less than 6 years while there was only one participant who had been in the industry for more than 25 years. A few were in the service for 6-10 years as shown in Table 4.4. This indicates that the three hospitals have employees who still have several years to serve the hospitals and deliver services to the public.

4.1.5 Level of education of respondents

The study further looked into the level of education of the respondents as given in Table 4.5

Table 4.5: Level of Education

Level of Education	Participants	Percentage
Secondary	0	0.00
Diploma	55	59.78
Degree	27	29.35
Masters	10	10.87
PhD	0	0.00
Total	**92**	**100.00**

The findings show that there were 11% of the respondents who had master's degree, 29% had bachelor's degree while 60% were diploma holders. The workforce in these three hospitals was majorly diploma holders and this indicated that the skills level might be above average to offer quality services to the public population. While all master's degree holders were in senior management positions, their experience did not seem to impact on the service delivery to the level that the diploma and certificate holders felt it should be at the moment of the study.

4.1.6 Influence of management style on service delivery

The results of effects of management style on daily service delivery are given in Table 4.6

Table 4.6: Influence of management style on service delivery

Rating	Responses	Percentage
Strongly Disagree	7	7.61
Disagree	6	6.52
Neutral	6	6.52
Agree	34	36.96
Strongly Agree	39	42.39
Total	**92**	**100.00**

When the question was posed on the influence of current management of daily service delivery, 42% of the respondents strongly agreed that the management had a lot of influence on service delivery, while about 7% either disagree or are were not sure on the influence of current management on service delivery. Those who strongly agreed that the management had a greater influence on service delivery mentioned that the Medical Superintendent was the sole decision maker in the facility and he/she decided on what aspects of changes, improvements and services to be effected. Management was solely by the manager and there was minimal or no delegation of decision making authority to junior managers, which they also felt was hindering adequate service delivery especially in his absence.

4.1.7 Influence of management on service delivery

The results of influence of aspects of management on service delivery in these hospitals are given in Table 4.7

Table 4.7: Influence of management functions on service delivery

Management functions	Responses	Percentage
Management style	35	38.04
Organization structure	15	16.30
Finance	10	10.87
Power and authority	32	34.78
Total	**92**	**100.00**

It was further noted that 38.04% of the respondents believed that management style had the biggest influence in service delivery in Public Hospitals in Nairobi County while at the same time only 10.87% respondents felt that finances played a role in the outcome of service delivery. Subsequently, 34.78% respondents believed that power and authority had an influence on the services delivered in Public Hospitals in Nairobi County while 16.30% believed that it is an organization structure. Table 4.7 shows how functions of management influence service delivery in Public Hospitals in Nairobi County.

4.1.8 Influence of change of management style on service delivery

The results of the impact of change in management style of service delivery are given in Table 4.8.

Table 4.8: How changing management style will influence service delivery

Rating	Responses	Percentage
Highly	39	42.39
Moderately	23	25.00
Maybe	25	27.17
Somehow	0	0.00
No impact	5	5.43
Total	**92**	**100.00**

Out of the 92 respondents, 39 (42.39%) felt that changing the current management would have a high impact on the services being offered in these facilities for the better as shown in Table 4.8. This they opined that needed a progressive leader who is diplomatic and open to discussion with the rest of the team to determine how best the services could be improved to suite the standards of the system and patients.

This was a response given by over 40% of those in the age group of 26-30 years according to the study. 5% of the respondents between 35-40 years of age believed that there will be no significant change in service delivery even if the management was changed due to direct influence from the central and County Government.

When the question on the impact on the management style and functions on service delivery was analyzed using level of education, years of experience and age, there was a significant response in relation to level of education. 90% of the participants who had Master's degree agreed that changing of the management style would have an impact on service delivery. Participants who held degrees at 85% response rate and 55% of diploma holders also believe there would be a greater improvement of services if there was a change of management to a more progressive leader.

4.1.9 Management functions to be improved

The results of management functions to be improved are given in Table 4.9

Table 4.9: Management functions to be improved

Management Aspect	Responses	Percentage
Motivation	35	38.04
Communication	18	19.57
Leadership	34	36.96
Delegation	5	5.43
Total	**92**	**100.00**

When asked about the functions of management which they felt should be addressed to improve the services in these facilities, 38% of the respondents agreed that they need to be motivated, 37% preferred a change in management as a whole while 20% felt the need for constant communication with them to enhance service delivery and only 5% had a suggestion that the management should delegate most of the services to improve service delivery. Motivation of staff and improvement in leadership skills were the major concern among the participants, irrespective of their years of experience or education level. Respondents who needed more delegation of functions, power and decision making authority from the management were mainly participants who held master's degree in these three hospitals.

4.1.10 Use of information technology

The results of use of information technology at the three hospitals are given in Table 4.10.

Table 4.10: Use of information technology

Response	Participants	Percentage
Yes	68	73.91
No	22	23.91
I am not sure	2	2.17
I don't know	0	0.00
Total	**92**	**100.00**

When assessing the use of ICT services in the facilities, a whole 74% of the respondents noted to have used these systems to offer services at one point in time, though not at the hospitals where they were currently working, 24% had never used them in any hospital while only 2% were not sure of using ICT services to offer services as shown in Table 4.10. These three hospitals had computer systems and applications mainly for billing and payment services, which were used by the finance team and at the administration areas only. Most of the participants had not used the systems in these three hospitals but had at least used them elsewhere, in other hospitals where they either trained or worked before joining the current work places.

4.1.11 Current application system against the best use

The results of response on the current use of application systems against their best use in these three hospitals is shown in Table 4.11

Table 4.11: Current application system against the best use

Responses	Participants	Percentage
Yes	20	29.41
No	39	57.35
I am not sure	8	11.76
I don’t know	1	1.47
Total	**68**	**100.00**

Those health workers who had used ICT were asked whether the current use and implementation of ICT services in these facilities were the best way to offer services to patients, 57% believed that it was not used in the best way while only 29% of the respondents felt that it served the purpose. The remaining respondents were either not sure or didn’t know. This information is represented in Table 4.11. Participants who responded that the ICT services were not being used to their best level noted that there needs to be a paperless system from admission to discharge of patients and outpatient areas to improve on the efficiency of service delivery.

All the processes according to 57% of the respondents need to go through a computer system, from admission, bed allocation, inquiry, payment and billing, consultation, nursing services, booking for operations, radiology services and the process of discharge. They believed that this system will improve efficiency of services being offered to the patients.

4.1.12 Areas in the hospital highly using ICT services

The results of areas of these three hospitals where ICT services were highly used is shown in Table 4.12

Table 4.12: Areas in the hospital highly using ICT services

Area	Responses	Percentage
Treatment	2	2.17
Management	6	6.52
Pharmacy	6	6.52
Procurement and supply	3	3.26
Billing and payment services	75	81.52
Total	**92**	**100.00**

The study further enquired on the Departments in the hospitals which are highly using ICT applications and tools where 75 respondents, representing 81% believed that billing and payment services were most utilizers of ICT as shown in the Table 4.12. This was followed by Pharmacy and Management at 6.5% each while treatment accounted for the least users of ICT services in these facilities. This shows that the uptake of ICT services in these hospitals is still very low, reducing efficiency and productivity of the hospitals. Departments like Outpatient, Senior Management, Pharmacy and stores still relied on paper work which further reduced the efficiency of performance.

4.1.13 Areas best to utilize ICT services

The results of response of best areas where ICT services are supposed to be utilized according to the respondents is given in Table 4.13

Table 4.13: Areas best to utilize ICT services

Area	Responses	Percentage
Treatment	10	10.87
Management	12	13.04
Pharmacy	3	3.26
Procurement and supply	12	13.04
Billing and payment services	55	59.78
Total	**92**	**100.00**

At the same time, most staff felt that these services are best if they are located at the billing Department of these facilities, a response given by about 60% of the respondents as per Table 4.13. Procurement and stores and Management were also good Departments for utilization of ICT services to improve service delivery in these hospitals, with 13% of participants agreeing to that information. However, Pharmacy was the most central for 3% of the respondents of a suitable Department where computer systems would revolutionize service delivery while only 10% of the participants believed that treatment could as well utilize ICT services well. This shows that the staff has not been fully sensitized on the benefits of applications which could reduce the burden on paperwork and assist with a more efficient service delivery to the patients.

4.1.14 ICT use and efficiency of service delivery

The response on use of ICT and efficiency of service delivery is given in Table 4.14

Figure 4.14: ICT use and efficiency of service delivery

Rating	Responses	Percentage
Strongly Disagree	11	11.96
Disagree	9	9.78
Neutral	25	27.17
Agree	20	21.74
Strongly Agree	27	29.35
Total	**92**	**100.00**

Asked about whether they agree that the current ICT application increases efficiency of health care delivery, 29% of the respondents strongly agreed that it was true while only 12% strongly disagreed with benefits of ICT in their facilities as shown in Table 4.14. Less sensitization and inadequate implementation of systems application which is more efficient in other facilities has not been appreciated in these hospitals due to their absence. The management should put in more effort in cross training and cross exposure to expose the staff to more efficient services so that they can appreciate their use and implement for the benefit of the patients and staff due to improved performance.

4.1.15 Value of the current ICT services

The results of the value of current use of ICT services in these three hospitals are given in Table 4.15

Table 4.15: Value of the current ICT services

Rating	Responses	Percentage
Highly valued	19	20.65
Moderately valued	31	33.70
Maybe valued	23	25.00
Somehow valued	12	13.04
Not valued	7	7.61
Total	**92**	**100.00**

The respondents were asked whether they believed that their knowledge and use of ICT services in their daily operations in these facilities were valued. 7 respondents said it was not valued while only 19 believed that it was valued as shown in Table 4.15. the results show that there is almost a similar view that with or without the ICT services, the health services being delivered to staff were still falling in the category of standard services. But majority of the respondents at least valued the services for efficiency of service delivery

4.1.16 Training and service delivery

Response on the significance of training of staff in these three hospitals on service delivery is shown in Table 4.16

Table 4.16: Training and service delivery

Response	Respondents	Percentage
Yes	89	96.74
No	1	1.09
I am not sure	1	1.09
I don’t know	1	1.09
Total	**92**	**100.00**

Almost 97% of the respondents believed that training played a significant role in service delivery to patients as shown in Table 4.16

It was worth noting that the response on significant of training was overwhelming in that it was cutting across the age, Department, and years of experience and level of education. Training is therefore an integral aspect if the hospitals are to improve on quality of health services.

4.1.17 Influence of training on skills development

Results of impact of training on skills and development in these three hospitals is shown in Table 4.17

Table 4.17: Influence of training on skills development

Responses	Respondents	Percentage
Very big impact	38	41.30
Big impact	29	31.52
Moderate impact	20	21.74
Small impact	5	5.43
No change	0	0.00
Total	**92**	**100.00**

Majority (38) of the respondents believed that training had a very big impact on their skills and development, representing 41.30% while 5 (5.43%) respondents felt that training had a very small impact on development of skills needed for service delivery in these facilities as shown in Table 4.17.

It should also be noted that there was a correlation between the years of experience and response on whether training impacts on skills development. This was because 75% of those who have worked for between 21-25 years indicated that there was a big and a very big impact of training on skills development as opposed to 32% of ages between 0-5 years for the same response.

4.1.18 Management recognition of further education

Results on how management recognizes staff that opted for further education is given in Table 4.18

Table 4.18: How management recognizes staff furthering education

Responses	Respondents	Percentage
Promotion	56	60.87
Salary adjustment	25	27.17
Office space	2	2.17
Others, Specify	9	9.78
Total	**92**	**100.00**

The respondents were asked whether the management of these facilities valued the staff and recognized their efforts to further their education, 60.87% of the respondents believed that management usually offer them promotion, 27.17% felt that they are appreciated by salary increment while 9.78% believed that the management does nothing about them furthering their education as shown in Table 4.18. This means that the management has not seriously put into consideration that individual staff put to improve on their skills and development. If this is done, then they will be motivated to even perform more and better.

4.1.19 Frequency of drug supply

Response of participants from these three hospitals on frequency of drug supply is given in Table 4.19

Table 4.19: Frequency of drug supply

Responses	Respondents	Percentage
Yes	17	18.48
No	68	73.91
I am not sure	5	5.43
I don’t know	2	2.17
Total	**92**	**100.00**

When asked about frequency of drug supply for operation of the facilities, 68 respondents (73.91%) affirmed that there was not adequate drug supply for service delivery while 17 respondents (18.48%) noted that the drugs were sufficient for their operations as shown in Table 4.19. Infrequent supply of drugs led to insufficiency of stock which later had a negative influence on the services which were being offered at the facility. Most staff concurred that they are sometimes forced to ask the relatives of the patients to procure the drugs and present to the hospitals as the facilities sometimes lacked the required medications.

4.1.20 Factors influencing drug supply

Results of factors influencing drug supply in these three Public Hospitals is shown in Table 4.20

Table 4.20: Factors influencing drug supply

Factors	No. of responses	Percentage
Procurement bureaucracy	56	60.87
Incompetent staff	3	3.26
Inadequate finance	24	26.09
I don't know	9	9.78
Others	0	0.00
Total	**92**	**100.00**

About 61% of the respondents believed that bureaucracy in procurement system prevented supply of adequate drugs for the facilities as shown in Table 4.20. On the same note, 54.35% of the respondents strongly agreed that improving the supply of drugs will tremendously improve the outcome of patients' recovery. This shows that there is a gap that needs to be filled and systems streamlined to reduce the bureaucracy that limits the supply and distribution of medicine in these hospitals.

4.1.21 Drug supply and improvement of patients' health care

Results of drug supply and improvement of patient's quality outcome is given in Table 4.21

Table 4.21: Drug supply and improvement of patients' health care

Rating	Responses	Percentage
Strongly Disagree	9	9.78
Disagree	4	4.35
Neutral	4	4.35
Agree	25	27.17
Strongly Agree	50	54.35
Total	**92**	**100.00**

When the question on whether adequate supply of drugs to these facilities would significantly improve the quality of healthcare was asked, 54.35% of the respondents strongly agreed that the supply of drugs will improve the outcome of quality of services offered to the patients, while at the same time, 9 responded and said that they strongly disagreed that there will be any improvement on the patient outcome, even with adequate supply of drugs. This is tabulated in Table 4.21

4.1.22 Services meeting expected standards of quality

Results of services meeting the expected standards of quality service delivery are shown in Table 4.22.

Table 4.22: Services meeting expected standards of quality

Response	No. of Respondents	Percentage
Yes	29	31.52
No	63	68.48
Total	**92**	**100.00**

Lastly, the respondents were asked whether the services that were offered met their expectation of quality care: 68% of the respondents felt that it did not meet the standards expected while an average 32 % believed that the services met the standards as shown in Table 4.22

It was also observed through analysis that there was overall disapproval of whether the current services being delivered meet the expectation of quality of care. This was regardless of the years of experience, level of education or age of the respondents. This may imply that hospital management may influence the rating or perception of the quality of health care services.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter contains a summary of the findings of the study, discussion, conclusion, recommendation of the study and further studies as done by the researcher.

5.1 Summary of findings

It was found out that management has more influence on the daily operation of the hospitals, a view given by 42% of the respondents. The managers of the hospitals were however not giving more responsibilities via direct delegation to their junior staff thereby dragging provision of certain services as reported by 5% of the respondents. Most (42%) of the respondents felt that with a change of management, there would be a more efficient way of service delivery to the patients, a response more from those with degree qualification and above. However, most of those who had basic certificate and diploma felt that nothing will change even with a change in management.

ICT systems and equipment were not commonly used at most of the point of service delivery apart from billing and payment services, with 73% of respondents having used them elsewhere but 57% of the respondents reported not having used them in these hospitals. Those in the wards were rarely in touch with ICT and most of the respondents concurred that the use of ICT facility was still below average that will be needed to efficiently manage and offer quality services to the patients. Majority of the respondents, 29% believed that if implemented, the systems would improve service delivery to the patients leading to better efficiency.

Most (60%) of the respondents in these hospitals were diploma holders and a few (29%) were degree holders. Those who held masters degrees (11%) were in agreement that regular trainings can enhance the rate and efficiency of services being offered to the patients, a response which was shared with most degree holders, unlike diploma holders who did not prefer the trainings to be organized in the facilities, because there was no reward from the management after further qualification, leading to stagnation as reported by 61% of the respondents. However, most respondents agreed that the staff had necessary qualifications which enabled them to offer services to the patients.

Frequency of drug supply was not reliable in all these facilities according to majority of the respondents, which was being attributed to procurement bureaucracy and inadequate finances according to majority (61%) of the respondents. Majority (54%) of the respondents also said that improving supply and delivery of drugs will lead to better service delivery to the patients and good patient outcomes.

5.2 Discussion

The discussion of results is outlined below. There were four factors which were investigated in the study which were found to have a greater influence on service delivery in Public Hospitals. These were management style, implementation of ICT services, Training and frequency of drug supply in Kenyatta National Hospital, Mbagathi Hospital and Mama Lucy Kibaki Hospital in Nairobi County. Out of 96 respondents, data was collected from 92 respondents, since 4 respondents either did not return the questionnaires or did not respond to the questions completely. Among the 92 respondents, 34 were from Kenyatta National Hospital, 27 were from Mbagathi District Hospital while 31 were from Mama Lucy Kibaki Hospital. This presented a response rate of 95%.

The findings on the first variable of the study on Management style and various aspects of management indicated that that management style and other aspects of management attributed to poor service delivery, demotivation and demoralization of the staff, long chain of command and failure by the system to recognize hard working staff for either promotion or financial reward. Services are below the expected standards due to fixed management systems and styles, inadequate decentralization of authority and delegation of activities. The findings are in agreement with those reported by Scotti, Harmon and Behson in 2007 which indicated that management difficulties included difficulty of the workforce to cope with rapid changes. In this perspective, most problems which could arise are easily detected and managed before they ended up disrupting service delivery by labour unrest and demotivation of employees.

The findings on the second variable of the study on implementation of ICT services also indicated that there was inadequate supply, installation, utilization and use of information technology, and where it was implemented; it was mainly used in billing and payment services. Record keeping of patient files in the wards and medical items supply to the Departments from the central store still relies on paperwork and the same from the ward to the stores.

The finding of the third variable of the study on Training indicated that the hospitals rarely organized for further training of the staff and where the staff put in more effort and advanced their skills they are rarely recognized either financially or by promotions and this has led to reduction in the standard of care offered to the patients in these hospitals.

The study findings on the fourth variable showed that most of the respondents (61%) agreed that inadequate supply of drugs was due to procurement bureaucracy and inadequate finances. Drug supply was not adequate due to bureaucracy in the procurement process from the central government (KEMSA) to the hospitals. This delay has led to poor service delivery to patients who need the drugs for their treatment, thereby patient outcome tend not to be as per the expected standards.

5.3 Conclusions

The study examined four areas to come up with the real reasons behind civil unrests including strikes in Public Health facilities, which were not being witnessed in private facilities before. The study was planned to include 96 respondents but a response from 92 respondents was received. Out of these, 61 were females while 31 were males indicating that the ratio of females to males in these hospitals in Nairobi County was two to one for the purposes of the study.

Most (42%) of the respondents felt that changing the management will improve services were between the age groups of 26-30 years of age, a generation which is eager to perform faster and deliver results. They believed that the current system is hampering their performance. Management staff therefore needs to have a discussion with staff in order to find out areas where services that need improvement to increase the level of satisfaction on health of the patients.

Implementation and use of ICT is in a minimal stage as most of those above 45 years and below 30 years of age have limited access to ICT in these hospitals. Those who have used these facilities agreed that they are more centered in billing and payment services and they further recommended that these are the places where ICT can best be implemented to improve services being delivered to patients in these hospitals.

Most of the respondents with Diploma did not want further training in their areas of study while all Masters' degree holders and more that 70% of Bachelor's degree holders wanted to be trained further on current medical and surgical techniques. Those who disliked further trainings claimed that the management would not recognize any further educational efforts put by employees. The hospitals' management rarely encouraged further education to their employees either.

There were challenges experienced in drug supply and most respondents indicated that procurement bureaucracy was the main reason contributing to shortage of good medicines in the hospitals. It was found that financial inadequacy played a part as most of the participants in the study indicated that procurement was the major reason contributing to inadequacy of good drugs in these hospitals.

5.4 Recommendations

The following recommendations were made from the study for consideration by the management in order to ensure that services offered in Public Hospitals in Nairobi County meet the needs of the patients' quality health care.

1. It is recommended that the management of the hospitals should be flexible and create a free working environment where staff would freely air their views on services being offered.

2. It is also recommended that there should be more delegation of power and authority to the mid level management staff who are in close contact with patients.

3. It is also recommended that the use and acceptance of ICT services should be scaled up and an awareness of its benefits should be communicated to the staff so that they can adopt the technology.

4. It is recommended that there is a need to decentralize the procurement process of drugs in order to reduce delay of services and ensure fast supply of drugs for adequate service delivery.

5.6 Further Studies

A further study should be conducted in order to investigate the impact of devolution and management of most Level Five Hospitals and below which are managed by the County Governments and their effects on service delivery. This will help in understanding the operation of these hospitals under new management system, staff views and patient outcomes.

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APPENDICES

APPENDIX 1 LETTER OF INTRODUCTION

Brian Kenya
P O Box 14164-00800
Nairobi
28/07/2015

To
The Director
Kenyatta National Hospital
P O Box 20723-00202
Nairobi

Dear Sir/Madam,

RE: FILLING OF QUESTIONNAIRE

My name is Brian Kenya and I am studying for a Master of Arts degree in Project Planning and Management from the University of Nairobi. I have obtained permission from the university management to conduct research. I am currently conducting as part of the requirements for the qualification. This will require me to administer a questionnaire designed to generate some insights and equally offer amicable support to my research proposal on the study topic, "Factors influencing service delivery in Public Hospitals in Nairobi County, Kenya". The information provided will be treated with confidence and classified. The research findings will assist managers of Public Hospitals to improve the service delivery.

I am hereby requesting you to grant me permission to contact a number of your staff and a few patients in order to fulfill this mandate

Your assistance will be highly appreciated.

Thank You

Yours Faithfully,

Brian Kenya
L50/70176/2013

APPENDIX 2 QUESTIONNAIRE FOR THE RESPONDENTS

Instructions

Fill in the questionnaire as truthful as possible by ticking in the relevant boxes and filling the blank spaces. The information gathered in this study will be treated with utmost privacy and confidentiality.

Section 1: Personal details

1.1 Tick your gender as appropriate

Male ☐ Female ☐

1.2 Age in complete years

20-25 ☐ 26-30 ☐ 31-35 ☐ 36-40 ☐ 41-45 ☐ 46-50 ☐ 51-55 ☐

above 56 ☐

1.3 Department

Administration ☐ Medical ☐ Surgical ☐ Procurement and Supplies ☐

Pharmacy ☐ Finance ☐ ICT ☐

1.4 Hospital service duration in years

0-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐

26-30 ☐ above 30 ☐

1.5 Level of education

Primary ☐ Secondary ☐ College Certificate ☐ College Diploma ☐

Bachelor Degree ☐ Masters Degree ☐ PhD ☐

Section 2: Management styles

To investigate how management style influences quality of healthcare service delivery in Public Hospitals in Nairobi County

3.1 Do you agree that the current management style influence the daily service delivery within the hospital?

Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐

3.2 What aspects of management do you think has the most influence on the services?

Management style ☐ Organization structure ☐ Finance ☐ Power and authority ☐

3.3 On a scale of 1-5 how much do you think changing the management style will influence on the general hospital service delivery?

Highly	Moderately	Maybe	Somehow	No impact
5	**4**	**3**	**2**	**1**

3.4 What aspects of the management do you feel should improve to ensure quality service delivery to the patient?

Motivation ☐ Communication ☐ Leadership ☐ Delegation ☐

3.5 Others, specify…….....

3.6 What is your view on the current management style within this hospital in relation to quality of service delivery?

Section 2: ICT

To investigate how implementation of ICT services influence service delivery in Public Hospitals in Nairobi County

2.1 Have you ever used any information technology in any of your services within this hospital?

Yes ☐ No ☐ I am not sure ☐ I don't Know ☐

2.2 If yes, do you think the manner in which ICT is applied currently is the best for the healthcare services delivery?

Yes ☐ No ☐ I am not sure ☐ I don't Know ☐

2.3 In which areas in the hospital is ICT most applied?

Treatment ☐ Management ☐ Pharmacy ☐ Procurement and supply ☐
Billing and payment services ☐

2.4 In which area do you believe ICT should be most applied?

Treatment ☐ Management ☐ Pharmacy ☐ Procurement and supply ☐
Billing and payment services ☐

2.5 Do you agree that the current ICT application increases efficiency of healthcare delivery?

Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐

2.6 On a scale of 1-5 to what extent do you value the current use of ICT on your daily patient interaction?

Highly valued	Moderately valued	Maybe valued	Somehow valued	Not valued
5	**4**	**3**	**2**	**1**

Section 4: Training

To investigate how training influences service delivery in Public Hospitals in Nairobi County

4.1 Do you believe training play a significant role in delivery of health services in Public Hospitals?

Yes ☐ No ☐ I am not sure ☐ I don't Know ☐

4.2 What is the average employee training in your organization?

O level ☐ Diploma ☐ Degree ☐ Post graduate ☐

4.3 Does your hospital encourage training and development among the staff as a means of enhancing their skills?

Yes ☐ No ☐ I am not sure ☐ I don't Know ☐

4.4 Do you agree that the training and skills that your staff has is adequate to deliver effective services to the patients?

Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐

4.5 On a scale of 1-5 to what extent do you think improving training and skills development will influence patient outcome?

Very Big influence	Big influence	Moderate influence	Small influence	No change
5	**4**	**3**	**2**	**1**

4.5 Do you encourage your staff to pursue further education?

Yes ☐ No ☐ I am not sure ☐ I don't Know ☐

4.6 How does the hospital appreciate educational efforts put in by the staff?

Promotion ☐ Salary adjustment ☐ Office Space ☐ Others, specify ☐

4.7 Does the hospital organize trainings for the staff?

Yes ☐ No ☐

4.8 Which type of training would you prefer the hospital to offer to the staff to enhance quality of service delivery to the patients?

……

……

……..

Section 5: Frequency of drug supply

To investigate how frequency of drug supply influence service delivery in Public Hospitals in Nairobi County

5.1 Is drug supply sufficient in your hospital?

Yes ☐ No ☐ I am not sure ☐ I don't Know ☐

5.2 What factors do you believe influences the supply of drugs?

Procurement bureaucracy ☐ Incompetent staff ☐ nadequate finance ☐

I don't know ☐ Others, specify ☐

5.3 Do you agree that improving supply of drugs will improve patient outcome?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	**2**	**3**	**4**	**5**

5.4 On a scale of 1-5 to what extent do you feel that the improvement on drug supply will improve the patient outcome?

Not at all	Maybe	Slightly	High impact	Huge impact
1	**2**	**3**	**4**	**5**

Section 6: Service Delivery

6.1 Do services delivered in this facility meet your expectation of quality of care?

Yes ☐ No ☐

6.2 Please give a reason for your answer above.

……

……

……..…

6.3 Please agree or disagree with the following

Instructions: does service delivery meet your expectations on the following?	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Affordability					
Accessibility					
Relevance					
Acceptability					

Thank you very much

APPENDIX 3 CONSENT FORM

Factors influencing service delivery in Public Hospitals: a case of Nairobi County, Kenya

I am Brian Kenya, a Master student at the University of Nairobi, College of Education and External Studies inviting you to participate in a research study which I am conducting as part of the requirements for course. The purpose of this research is to understand how management styles, ICT implementation, training and drug supply in these facilities influence the outcome of service delivery.

Your participation will involve reading understanding and answering the questions in the questionnaire which will be administered. There are no known risks associated with this research. This research may help us to understand how services can be made better for the patients.

I will do everything to protect your privacy and confidentiality. Your identity will not be revealed in any publication resulting from this study. Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

If you have any questions or concerns about this study or any problem arising, please contact Brian Kenya on 0735256685. For questions or concerns about your rights as a research participant, please feel free to contact me on the same number.

Consent

I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study

Participant's signature _____ Date: _____